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ABSTRACT

A 5-week, 12-hour course given to the community emphasized understanding and coping with stress. At the beginning of the course several inventories were administered to the students, who also completed the instruments in a follow-up procedure 10-12 weeks after the end of the seminar. The course focused on recognition of stress signals and the practice of relaxation and other coping strategies taught in a Stimulus-Organism-Response model. Follow-up assessment of behavior changes found significant changes in several dimensions of the SCL-90 and in the Autonomic Nervous System Questionnaire, indicating more effective coping with stress. Specific behaviors leading to a reported lessening of stress and a higher level of wellness also occurred, including the practice of relaxation, physical exercise, better nutrition, more effort toward self-development, a perception of less stress, and more positive responses to the handling of stress. Data indicated that a 5-week course on stress had effects which endured for at least 12 weeks. The course positively affected the students' perceptions of their progress in lessening the effects of stress on their lives and in handling stress more effectively. (Author/NRB)

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Giving Stress Away: Results of a Five-Week Stress Course

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Abstract

A five-week stress course offered to the community emphasized understanding and coping with stress. Recognition of stress signals and practicing relaxation and other coping strategies was taught in a S-O-R (stress Stimulus-Organism perception and evaluation of stressors - stress Response) model. Approximately 12 weeks after the course behavioral changes were assessed. Significant changes in several dimensions of the SCL-90 and in the Autonomic Nervous System Questionnaire occurred indicating more effective coping with stress. Specific behaviors occurred leading to a reported lessening of stress and a higher level of wellness. These included the practice of relaxation, physical exercise, better nutrition, doing more things for themselves, a perception of less stress and a reported better handling of stress in their lives.

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Giving Stress Away: Results of a Five-Week Stress Course

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This paper describes a twelve hour stress course given to the community over a five-week period. The course was advertised to the general public and was given through the auspices of a psychiatric hospital at a nominal charge of $35. The motivation for offering the course came from sensing a need for understanding and reducing stress from clients, students and the general public, and from the urgings over ten years ago of George Miller in his American Psychological Association presidential address to "give psychology away". Other five-week courses had been offered to the community and the length seemed to meet their time demands whereas a full sixteen-week semester course did not. Whether any real change would come from this five-week course was investigated by the before and after course measures taken.

The Course and Its Objectives

The course was designed to increase <u>understanding</u> about what stress is and how stress effects each of us. The course was based on the premise that it is in understanding how stress effects us psychophysiologically that change can occur. Describing specifically how stress effects the cardiovascular, respiratory, muscular, gastrointestinal, and central nervous nervous systems allows the person to recognize the signs of stress. Upon recognition the person can then do something about the stress. Benefits of having stress under control were discussed in terms of creativity, job performance, emotional and physical health. Physiological and psychological effects of stress were discussed and led to the physiological and psychological coping strategies that were practiced. This general overview led to six specific learning objectives: 1) to recognize the signs of stress in ourselves and

others; 2) to understand why stress develops, how it can be good or bad, and how it varies in intensity; 3) what physical and psychological stress are and how they interrelate; 4) to understand how stress effects each of us and how we can change its effects; 5) to expore and learn healthy stress responses; and 6) how to gain control of stress by practicing specific unstressing techniques.

The lecture discussions included the use of 35mm slides to define stress, to give examples of physical and psychological stressors and to show how stress can be both good and bad, positive and negative. Specific sources of stress for each person were examined via work sheets. Conflict, pressure, and frustration were discussed as were the typical psychological and physiological responses to slight, moderate, and high amounts of stress. The Yerkes-Dodson inverted U-shaped function relating stress level and performance was emphasized. Selye's concepts of diseases of adaptation and the general adaptation syndrome were discussed in detail. The physiology of the sympathetic autonomic nervous and of the brain were discussed. Behavioral danger signals that indicate too much stress were examined. Type A behavior, cardiovascular disease proneness, and personality characteristics were related to stress responses as were high stress jobs like those of air traffic controllers. A main thrust was that stress, coming from internal and/or external sources, has a general function which, when the level reaches more than a moderate healthy amount, produces decrements in performance and breakdown of psychophysiological systems. The concept of homeostasis was emphasized and the individuality of homeostatic balance for each person was discussed in terms not only of genetics but also of past history and learned coping styles.

An S-O-R (Stimulus-Organism-Response) model was used to discuss stress reduction strategies. For example, avoiding stress producing situations to lessen stress by reducing stress at "S" was discussed. Likewise at "O",

cognitive restructuring was discussed as a way of changing the effects of stress by changing thinking about stressor stimuli. Relaxation techniques were explained and practiced as a way of reducing the stress responses at "R". Other stress reduction techniques discussed included exercise, sleep, hobbies, service, diet and nutrition, communication skills, humor, and ways to seek a balance in one's life through mind, body, and spirit interactions.

The relaxation segment of the course included practicing progressive relaxation, some autogenic phrases, and some electromyographic and thermal biofeedback. The total amount of time taken in the practice of the progressive relaxation and autogenic training was about 50 minutes, occurring over two different sessions. Lastly, a holistic model based in part on John Travis' ideas of high level wellness was discussed. The wellness model goes beyond a traditional medicine model which seeks to remediate symptoms and physical disease. The wellness model emphasizes individual responsibility through education, growth, and self-actualization.

The students were instructed in how to help decide what areas of their lives needed some work with regard to reaching this high level wellness and in particular what strategies would be helpful in reducing the stress that had become self-defeating and above their homeostatic level. A behavioral contract was designed and was individually worked out as a mechanism to carrying out the behaviors they wanted to change. A form for daily recording the behaviors listed in the contract was explained.

Methods

At the beginning of the course several inventories were administered within the first hour and included the SCL-90, the Autonomic Nervous System Questionnaire, the Rotter Internal External Locus of Control Scale, and the Holmes-Rahe Life Change Events Scale. These same instruments were administered a second

time approximately ten to twelve weeks after the end of the seminar. Thirty-four people took the course and 17 returned the follow-up inventories which were mailed approximately 10 weeks after the end of the course. At the end of the course within the last hour of the fifth session, a course evaluation was administered.

Results and Discussion

The results of the course evaluation are shown in Table 1. Seventy-nine percent agreed that they felt that this course dealt with the material and subject matter which met with their expectations. Ninety-seven percent agreed with the statement that the style of presentation was effective. That their interest in the area of stress was stimulated by the course was agreed with by 94% of the class. That they felt free to ask questions and participate in discussion was agreed with by 94%. When asked whether the course will be of a practical benefit 88% agreed. When asked if they would highly recommend the course to others 82% were in agreement. Overall the course seemed to be very successful with no one giving a "strong disagreement" response to any of the above questions and only one or two people at most in the "disagreement" category on any one question. The value of the course, however, can be judged not only in terms of satisfaction with the material, style of presentation, the arousing of interests and the forecasting of benefit, but also in terms of actual changes occurring in the lives of the students.

The Rotter Internal External Locus of Control Scale showed a pre-course score of 8.8 and a post-score of 8.2. There was a shift towards internality but it was not significant. There were mean decreases on all of the dimensions of the SCL-90. These symptom dimensions include somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, additional items and the global indices of distress.

The mean SCL-90 pre-course scores were compared to the mean post-course scores with t-tests (see Table 2). The .05 level of significance was used and significant t's occurred for interpersonal sensitivity, depression psychoticism, additional items (poor appetite, overeating, sleep disturbances, thoughts of death, feelings of guilt) and the positive symptom total.

The Holmes-Rahe Life Stress Events Inventory showed a mean decrease of 17 points from a pre-course mean of 165 points to a post-course score of 148 points ($t = .61$, $df = 16$, $p = .56$).

The Autonomic Nervous System Questionnaire was used to obtain a self-reported measure of the sympathetic (adrenergic) and parasympathetic (cholinergic) symptoms occurring while experiencing stress. The sympathetic items include muscle tension, problems in sleeping, cold feet, wet hands, wet armpits, heart palpitations, dry mouth, butterflies in the stomach, etc. The mean decrease from 63 to 34 was significant ($t = 4.537$, $df = 16$, $p = .0005$). Likewise there was a decrease in parasympathetic autonomic symptoms checked. Parasympathetic symptoms include heartburn, diarrhea, frequent urination, muscle weakness, sleeping more than usual, excessive appetite, growling stomach, difficulty breathing, etc. The post-score mean of 33 was significantly lower than the pre-course mean of 51 ($t = 4.01$, $df = 16$, $p = .0013$). These changes probably indicated more control of autonomic nervous system responses under stress.

These changes were substantiated by a questionnaire which was sent out with the post-course inventories (see Table 3). Question 1 asked specifically whether they had done relaxation exercises as one of the unstressing techniques. Forty percent said they had done none; 20% said they practiced once every two weeks; 40% practiced once each week or more often. Question 2 asked whether they were now engaging in any physical exercises. Thirteen percent said none; 20% said once every two weeks; 67% said once a week or more. Question 3 asked if they were watching calories or types of foods discussed in the course and

thus were involved in some form of nutrition or dieting. Thirteen percent indicated none; 7% indicated once every two weeks; 80% said once a week or more. Question 4 asked whether they were doing things for themselves that they wanted to but did not do before the class. Forty-three percent said that they were doing something once every two weeks; 57% said that they were doing something once each week or more.

Question 5 asked whether they listed any behaviors in their behavioral contract that they wanted to change. Seven people reported "yes", eight reported "no". Of the seven who reported yes, when asked how many different behaviors they had worked on over the twelve week period, they responded on the average of 3.5 behaviors. When asked if they kept a record of the progress only one person responded yes. When asked did you improve on any of the behaviors which you listed on the contract, 10% reported no; 40% said they improved a litttle; 40% indicated they improved a moderate amount; 10% indicated they improved quite a bit. When asked how many behaviors they made at least a little improvement on they responded with a mean of 1.9 behaviors. When asked how many behaviors they worked on in which they made no progress they reported a mean of 1.7 behaviors.

Question 6 asked on the average how much progress have you made in lessening stress and its effects on your life. Forty-four percent said they made little progress; 50% said they made some progress; 6% said they made good progress. Question 7 asked whether what they learned in the class changed their attitudes or perceptions of stress, so that they could now handle stress better in everyday life. Six percent said they handled it much better; 82% said better; 12% said the same as before the class; and no one reported handling stress worse or much worse. Question 8 asked whether the stress class had been of benefit. Thirty-five percent said much benefit; 53% said some benefit; 12% said a little benefit; no one said no benefit.

The data speaks to the fact that a five-week course on stress does have effects which endure for at least twelve weeks. Significant decreases on the interpersonal sensitivity dimension of the SCL-90 reflect a decrease in feelings of personal inadequacy and inferiority, especially in comparison with others. This category also reflects decreases in self-deprecation and feelings of uneasiness and discomfort in interpersonal interactions. To a large extent this reflects a change in the thinking or "O" dimension of the S-O-R model. The dimension of depression showed a significant decrease and indicated a reduction in signs of withdrawal of life interest, lack of motivation, loss of vital energy, feelings of hopelessness, and other cognitive and somatic correlates of depression. The SCL-90 category "additional items" also showed a significant decrease and reflected decreases in poor appetite, overeating, sleep disturbances, thoughts of death, and feelings of guilt. That the "positive symptom total" significantly decreased reflected a decrease in the total number of symptoms the person checked. It would seem likely that the person's symptoms would decrease as control over autonomic function increased (significant decreases reported in the Autonomic Nervous System Questionnaire). Positive influences on these decreases may be due to the 60% who indicated they were practicing some form of relaxation, the 87% who said they were doing some physical exercise, the 87% who were practicing better nutrition, and the 100% who indicated they were taking some time for themselves and doing things just for themselves. It is clear that the course positively affected the students' perceptions of their making progress in lessening the effects of stress in their lives (100%) and in handling stress better (100%).

TABLE 1. Course Evaluation Results (Percentages).

	Item	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1.	Appropriate subject matter	32	47	15	6	0
2.	Effective style of presentation	56	41	0	3	0
3.	Interest in stress stimulated	50	44	6	0	0
4.	Free to ask questions and participate	46	48	6	0	0
5.	Course will be of practical benefit	32	56	9	3	0
6.	Highly recommend course	42	40	15	3	0

TABLE 2. SCL-90 Pre- and Post- Course Means, Standard Deviations, t-scores, and Probabilities.

Dimension	Pre-Course Mean	Pre-Course SD	Post-Course Mean	Post-Course SD	t	p
Somatization	55.5	17.1	51.2	16.4	1.047	.31
Obsessive compulsive	64.5	7.6	59.2	17.6	1.656	.11
Interpersonal sensitivity	64.9	9.0	54.5	22.4	2.340	.03*
Depression	64.3	9.2	55.2	23.2	2.030	.056
Anxiety	57.5	17.4	55.2	16.9	1.217	.24
Hostility	57.8	17.4	46.6	24.1	1.630	.12
Phobic Anxiety	25.5	31.6	24.3	30.0	.1692	.86
Paranoid Ideation	50.4	25.7	47.2	28.2	.6127	.55
Psychoticism	57.6	23.6	39.8	34.8	2.172	.04*
Additional Items	8.5	5.1	6.6	4.8	2.196	.04*
Global Severity Index	64.6	8.7	61.9	9.8	1.665	.11
Positive Symptom Total	62.1	7.8	58.3	10.2	2.762	.01*
Positive Symptom Distress	61.8	7.3	55.1	18.8	1.791	.09

*Statistically significant

TABLE 3. Post-Course Questionnaire of Beahvioral Results Over a Twelve-Week Period (Percentages).

Item		None	Once every 2 weeks	Once per week	More than once per week
1.	Relaxation exercises	40	20	7	33
2.	Physical exercises	13	20	7	60
3.	Dieting & Nutrition	13	7	7	73
4.	Doing things for self	0	43	35	21
		Yes	No		
5.	Used behavioral contract	47	53		
		No progress	Little	Some	Good	Much progress
6.	Lessened stress and its effects	0	44	50	6	0
		Much better	Better	Same	Worse	Much worse
7.	Attitudes changed and handles stress better	6	82	12	0	0
		Very much benefit	Much	Some	Little	No benefit
8.	Course benefit to me	0	35	53	12	0

This seminar is available to be presented to professional groups as well as to the public as a one-day intensive workshop. Call or write for details.

UNDERSTANDING AND COPING WITH STRESS

Stress is a major cause of poor health, poor performance, low productivity, wasted time and wasted lives. What does stress cost you in money, fatigue, irritability, conflict, and just plain lack of fun? And what does it cost your organization? Studies show that stress costs American industry an estimated $20 billion every year. Stress doesn't have to be so costly. An increasing number of people every year are learning how to cope with stress successfully.

This program is especially designed to increase understanding about how the stress encountered in daily life (at work, at home, in the external environment, and coming from within) affects individuals. It is only in understanding how stress affects the cardiovascular, respiratory, muscular, gastro-intestinal systems — as well as the brain, nervous system, and glands — that you can recognize the signs of stress and then choose to do something about it. When you understand how stress affects creativity, job performance, and emotional reactions, you can develop better coping techniques.

Physiological and psychological effects of stress require physiological and psychological coping strategies. After assessing your stress level, you will learn strategies for coping with stress. You will practice anti-stress techniques such as progressive relaxation and autogenic training. You will learn how to challenge thoughts that create stress (concerns of low self-esteem, helplessness, anxiety, and worry).

This program does not focus on esoteric theory — it is a pragmatic seminar concentrating on stress reduction techniques. Each program is conducted by well-qualified professional psychologists. Persons attending will learn a variety of practical techniques for stress reduction which can be implemented immediately.

PROGRAM TOPICS

- BASICS ABOUT STRESS
  What it is and isn't, how your body responds, types of responses, benefits of stress, problems in coping successfully.

- SELF EXPLORATION
  Analyzing predominant stress factors, analyzing personal stress situations, clarifying response patterns, developing a life-events rating scale.

- TECHNIQUES FOR COPING
  Desensitization, autogenics, self-hypnosis, meditation, nutrition, exercise, music, religion, changing life style patterns, family relationships.

- RELAXATION EXERCISES
  Basic principles, individual and group practice, biofeedback principles and demonstration, individual practice.

- PERSONAL ACTION PLAN
  Clarify objectives, develop starting point, design action program, brainstorm ideas.

human resource associates

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At This Seminar-Workshop You Will Learn How To . . .

- Understand and Detect Stress in Your Own Life
  - ☐ Internal (self-doubt, worry, helplessness, etc) causes of stress
  - ☐ External (job pressures, home demands, stress from the general environment, including diet, exercises, pollution, etc.) causes of stress
  - ☐ The difference between good and bad stress
  - ☐ How the intensity and quantity of stress summates in its effects
  - ☐ How much stress you have as measured by the Holmes-Rahe Life Change Unit test
  - ☐ How stress affects job performance
  - ☐ How stress can lead to increased energy and achievement
  - ☐ How stress affects creativity
  - ☐ How stress affects problem solving
  - ☐ How stress affects health and aging
  - ☐ How stress affects brain and nervous system
  - ☐ How stress affects motivation and emotion
  - ☐ How stress can lead to absenteeism and hospitalization
  - ☐ Type A and Type B personality (which are you)
  - ☐ Diseases of adaptation
  - ☐ New research on stress and cancer
  - ☐ New research on stress and cardiovascular disease

- Practice Anti-Stress Techniques
  - ☐ Exercise techniques
  - ☐ Nutrition techniques.
  - ☐ Relaxation techniques
  - ☐ Desensitization techniques
  - ☐ Emotional techniques

- Know Where To Go For Further Help
  - ☐ Referral sources in the community
  - ☐ Suggested books and audio cassette tapes

- Use the GSR2 Biofeedback Unit, provided with registration fee, for continuing practice in your office or home.

SEMINAR-WORKSHOP LEADER

Dr. James P. Motiff is active in research, teaching, and consulting on the topic of stress and biofeedback. He does stress management counseling and biofeedback therapy with a variety of clients, including business and industrial executives. He has offered seminar-workshop in this area for Holland Hospital, Pine Rest Christian Hospital, Police Recruit School, Sealed Power Corporation, Ottawa County Department of Social Services, and many educational institutions and churches.

Dr. Motiff is certified by the Biofeedback Society of Michigan as a Biofeedback Practitioner and is licensed by the State of Michigan as a Psychologist. He is a member of the American Association for the Advancement of Tension Control, The Biofeedback Society of Michigan, The American Association of Biofeedback Clinicians, The Society for Psychotherapy Research, The Midwestern Psychological Society. The Society of the Sigma Xi, International Association for the Study of Pain and the International Primatological Society. He is listed in American Men of Science, Who's Who in the Midwest, Dictionary of International Biography, Book of Honor of the American Biographical Institute. He received the Outstanding Educator of America Award in 1972 and 1973 and the Kelly Danen Award in 1973. He received his B.A. degree cum laude from St. Norbert College and his M.A. and Ph.D. degrees in psychology from the University of South Dakota. He is Associate Professor at Hope College, where he has been a faculty member since 1969

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